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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/640,230	08/16/2000	Peter V. Boesen	P03999US2	3395
22885	7590	07/29/2005	EXAMINER	
MCKEE, VOORHEES & SEASE, P.L.C. 801 GRAND AVENUE SUITE 3200 DES MOINES, IA 50309-2721			YUN, EUGENE	
		ART UNIT	PAPER NUMBER	
			2682	

DATE MAILED: 07/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/640,230	BOESEN, PETER V.
	Examiner	Art Unit
	Eugene Yun	2682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 17-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_ is/are allowed.
- 6) Claim(s) 17-30 is/are rejected.
- 7) Claim(s) \_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 16 August 2000 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | Paper No(s)/Mail Date. ____ .   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: ____ .                                   |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 17, 18, 20-24 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ono (US 4,334,315) in view of Anderson (US 5,721,783).

Referring to Claim 17, Ono teaches a method of transmitting voice sound information comprising:

Sensing the voice sound vibrations of a user through an earpiece (fig. 8) having a bone conduction sensor adapted to convert voice sound vibrations to electrical signals (see col. 3, lines 18-22), and a processor operatively connected to the bone conduction sensor, a first transmitter, and a first receiver (see col. 3, lines 18-24);

Transmitting the voice sound information from the first transmitter to a second receiver 14 (fig. 11) connected to an external connector of a host device 4 (fig. 11);

Receiving the voice sound information at the second receiver (see col. 3, lines 15-17); and

Communicating the voice sound information from the second receiver to the host device (see col. 3, lines 15-17).

Ono does not teach the processor adapted for digitally processing the electrical signals to package for transmission. Anderson teaches the processor adapted for

digitally processing the electrical signals to package for transmission (see col. 12, lines 32-46 and the process of digital processing starting from 880 in fig. 8). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Anderson to said apparatus of Ono in order to further improve the signal quality and strength in a wireless earpiece.

Referring to Claim 18, Ono also teaches the earpiece not occluding the external auditory canal of the user (fig. 7).

Referring to Claim 20, Ono also teaches a speech processor (see 'V' in figs. 1, 2, and 4)

Referring to Claim 21, Ono teaches a voice sound transmitting system, comprising:

An earpiece (fig. 8) comprising a bone conduction sensor adapted to convert vibrations of voice sound information to electrical signals (see col. 3, lines 18-22), a processor operatively connected to the bone conduction sensor, a first transmitter operatively connected to the processor and a first receiver operatively connected to the processor (see col. 3, lines 18-24);

A connector for connecting a second receiver and a second transmitter to a host device (see col. 3, lines 15-17);

The second transmitter and the second receiver adapted for communication with the first receiver and the first transmitter of the earpiece (see col. 3, lines 15-17).

Ono does not teach the processor adapted for digitally processing the electrical signals to package for transmission. Anderson teaches the processor adapted for

digitally processing the electrical signals to package for transmission (see col. 12, lines 32-46 and the process of digital processing starting from 880 in fig. 8). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Anderson to said apparatus of Ono in order to further improve the signal quality and strength in a wireless earpiece.

Referring to Claim 22, Ono also teaches the host device as a cellular phone (see col. 2, lines 18-20).

Referring to Claim 23, Ono also teaches the host device as a computer (see col. 2, lines 18-20).

Referring to Claim 24, Ono also teaches the host device as a personal digital assistant (see col. 2, lines 18-20).

Referring to Claim 27, Ono also teaches the connector housed within a cradle (see fig. 11).

3. Claims 19, 25, 26, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ono and Anderson in view of Puthuff et al. (US 6,181,801).

Referring to Claim 25, the combination of Anderson and Ono does not teach a headphone-jack type connector. Puthuff teaches a headphone-jack type connector (see col. 6, lines 19-21). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Puthuff to said apparatus of Ono in order to expand the different methods a communication earpiece can be used.

Referring to Claims 19 and 28, the combination of Anderson and Ono does not teach an air conduction sensor electrically connected to the processor. Puthuff teaches an air conduction sensor electrically connected to the processor (see ABSTRACT and fig. 1). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Puthuff to said apparatus of Ono in order to expand the different methods a communication earpiece can be used.

Referring to Claim 26, Puthuff also teaches the connector as a serial connector (see fig. 1 where most computers are equipped with serial connectors).

4. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ono in view of Viallet (5,917,698) and Chen (US 5,664,012).

Referring to Claim 29, Ono teaches a voice sound system, comprising:

An earpiece (fig. 8) having a bone conduction sensor, a speech processor operatively connected to the sensor (see col. 3, lines 18-22), a first transmitter operatively connected to the speech processor and a first receiver operatively connected to the speech processor (see col. 3, lines 18-24);

Ono does not teach a cradle comprising a second transmitter and second receiver for communicating with the first transceiver and first receiver. Chen teaches a cradle for supporting a host device comprising a second transmitter and second receiver for communicating with the first transceiver and first receiver (see fig. 2 noting that the earpiece and microphone send and receive signals with the cradle) and an air conduction sensor 62 (fig. 3). Therefore, it would have been obvious to one of ordinary

skill in the art at the time the invention was made to provide the teachings of Chen to said apparatus of Ono in order to increase the convenience of hands-free communication.

The combination of Ono and Chen does not teach the cradle providing for electromagnetic shielding. Viallet teaches the cradle providing for electromagnetic shielding (see col. 1, lines 56-67 and col. 2, lines 1-2). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Viallet to said apparatus of Ono in order to better increase the safety of smaller, high-powered communication devices.

5. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson (US 5,721,783) in view of Viallet.

Referring to Claim 30, Anderson teaches a device for interfacing a phone to a wireless earpiece, comprising:

A housing 23 (fig. 2);

A transmitter 27 (fig. 2) and a receiver 24 (fig. 2) disposed within the housing for wirelessly communicating with the wireless earpiece; and

An external connector providing connections between the transmitter and receiver within the housing and the phone (see col. 6, lines 6-21 noting that the handset can be removed).

Anderson does not teach the housing providing electromagnetic shielding. Viallet teaches the housing providing electromagnetic shielding (see col. 1, lines 56-67

and col. 2, lines 1-2). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Viallet to said apparatus of Anderson in order to better increase the safety of smaller, high-powered communication devices.

### ***Response to Arguments***

6. Applicant's arguments with respect to claims 17-28 have been considered but are moot in view of the new ground(s) of rejection.
  
7. Applicant's arguments filed 5/9/2005 have been fully considered but they are not persuasive.

Regarding Claim 29, the applicant argues the deficiency of digital processing in the cited prior art. However, there is no indication in the claim regarding digital processing. Therefore, the argument is irrelevant and the examiner stands by the original rejection. Even if the limitation of digital processing was included in the claim, the Anderson reference can be used in combination to teach digital processing as was done in claims 17 and 21.

Regarding Claim 30, the examiner points out col. 6, lines 6-21 showing that there is indeed an external connector connecting the housing and the wireless handset since the passage clearly notes that the handset can be removed.

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eugene Yun whose telephone number is (571) 272-7860. The examiner can normally be reached on 9:00am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nick Corsaro can be reached on (571) 272-7876. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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